Australian conglomerate accelerates core applications with Cisco HyperFlex and Intel Optane SSDs

Size: 1400 employees · Industry: Chemicals, energy, and fertilizers · Location: Murdoch, Australia

Wesfarmers Chemicals, Energy & Fertilisers (WesCEF) operates chemical, energy, and fertiliser businesses that serve a range of sectors in Australian and international markets. The company employs roughly 1400 people and has a number of brands, including CSBP, Kleenheat, Australian Gold Reagents, EVOL LNG, ModWood, Australian Vinlys, and Decipher. WesCEF is part of Wesfarmers Limited, one of Australia’s largest publicly-listed companies. For more information, visit wescef.com.au.

For more information
• Cisco HyperFlex
• Cisco Intersight
• Cisco OTV
• Intel Optane SSDs

Challenges
• Refresh and align two data centers
• Implement full data replication and disaster recovery
• Accelerate mission-critical applications

Solutions
• Cisco HyperFlex™ Hyperconverged Infrastructure (HCI) with Intel® Xeon® Scalable processors and Intel® Optane™ Solid State Drives (SSDs)
• Cisco Intersight™ SaaS Systems Management Platform
• Cisco UCS® S3260 Storage Server
• Cisco Overlay Transport Virtualization (OTV)

Results
• Reduced application latency to under four milliseconds
• Accelerated backups from 23 hours to 2 hours
• Established seamless, 60-second failover

Source: As reported by WesCEF from an interview and data provided in 2020.
Challenge: Stretch infrastructure environment across two data centers
With aging infrastructure systems and little to no storage capacity, Andrew Weighell was bracing for a serious hardware failure. And he feared it would happen in the middle of the night.

“Our two data centers were at full capacity,” the interim chief information officer for WesCEF recalls, citing years of business growth. “If one went down, we would have been forced to ration capacity for our businesses. Nobody wants to be the one picking and choosing which applications—and which businesses—get to stay online.”

WesCEF’s IT team must support the technology needs of multiple business entities, several of which operate 24 hours a day and all of which rely heavily on core ERP applications like JD Edwards. If the performance of those applications suffer, it can affect WesCEF’s inventory tracking, transaction processing, and truck dispatching capabilities.

The time was ripe for a data center refresh.

“It’s not as if there was something wrong with what we had. We loved our Cisco UCS servers,” says Adem Cahtarevic, technology systems manager for WesCEF. “We just needed more capacity and better disaster recovery.”

“We also saw an opportunity to simplify everything,” adds Elliot Segler, senior cloud engineer at WesCEF. “We’ve been all-virtual since 2003 and were ready for the next phase of virtual storage, so we decided to look into hyperconverged infrastructure.”

After evaluating several solutions, WesCEF chose Cisco HyperFlex with Intel Xeon Scalable processors and Intel Optane SSDs.

“We wanted a platform that could span both of our data centers and wouldn’t require us to make application changes,” Weighell says. “Other solutions would have forced us to re-IP our legacy systems, some of which are 15 years old.”

WesCEF installed five-node Cisco HyperFlex clusters in each of its data centers and was able to stretch its Layer 2 domain across both sites using Cisco OTV. Integrated with Veeam Availability Suite, the active/active data centers provide synchronous data replication and seamless disaster recovery (DR). Backups that used to take 23 hours now take two hours¹, and in the event of a failure, the entire environment can recover in 60 seconds¹.

“The integration between Cisco HyperFlex and Veeam is a game changer,” says Cahtarevic. “With the data centers now being active/active, we have full DR without having to pay for and maintain a dedicated DR facility.”

Adem Cahtarevic
Technology Systems Manager, WesCEF

¹ Based on customer experience and data.
Flash storage boosts performance, capacity

In addition to providing more consistency and resiliency, Cisco HyperFlex has delivered unanticipated levels of performance and capacity. Much of that is due to the platform’s deduplication and compression features that are tightly coupled with Intel Optane SSDs.

“To be honest, we didn’t quite believe the performance and capacity numbers we had heard, but they turned out to be conservative,” Weighell says. “Application latency is now consistently under four milliseconds¹, which is mind blowing, especially with the number of VMs we have.”

“We had estimated how much more CPU and storage we’d get with the deduplication and compression technology, but it’s far more than we expected,” Segler adds.

“Andrew Weighell
Interim Chief Information Officer, WesCEF
“Cisco Intersight provides intelligent monitoring and proactive alerts, so we don’t have to spend all of our time in dashboards worrying about the blinking lights.”

Adem Cahtarevic
Technology Systems Manager, WesCEF

Simplifying and automating IT operations

Using Cisco Intersight, WesCEF now manages its two physical data centers as one logical environment. But according to company leaders, the platform is largely automated and hands-off.

“We used to check our capacity on a daily basis. Now we look once every few months,” says Cahtarevic. “Cisco Intersight provides intelligent monitoring and proactive alerts, so we don’t have to spend all of our time in dashboards worrying about the blinking lights.”

Instead, the WesCEF IT team has shifted its focus to business enablement. From digital twin and analytics technologies to sensor plug-and-play and fluid edge computing to multicloud strategies that provide additional workload flexibility, the team now has the time and infrastructure to support whatever WesCEF’s brands may need.

“We are thrilled with the enhancements and opportunities these technologies will bring WesCEF. They’ll help us improve business performance, drive operational efficiency, and focus on strategic outcomes,” Weighell says. “Cisco HyperFlex is easy to deploy, simple to manage, and offers superior performance. It’s the heart of our technology environment, and we trust it to run all of our critical infrastructure.”

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